



Dart Hawkesbury
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada
Tel (613) 632-5200

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	
PO039137	ACI001-VC	2	1	Net 30	M304S22GA4P	304/316 Sheet .032 : MATERIAL: AISI 304/316 SS SHEET ANNEALED AS PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240 receive ft				64	3/6/2018	64		S047936	Stock	3/5/2018	\$ 3.49 / sf	0		
		3			M1018R3.500	M1018R3.500 : MATERIAL: AISI 1018-1025 ROUND BAR M1010S20GA AS PER MIL-S-7097 OR ASTM A108 receive ft				6		6		S047937	Stock	3/5/2018	\$ 31.09 / ft	0		
		4			M4140N-R3.250	4140 Steel Round Bar 3.250" receive ft						6		S047938	Stock	3/5/2018	\$ 53.33 / ft	0		
		7			M304TR1.750W.120	304 Seamless Tubing 1.75 X .120W : MATERIAL: AISI 304/316 SS SEAMLESS ROUND TUBING AS PER ASTM A213 OR ASME SA213 OR ASTM A269 receive ft				12		20		S047939	Stock	3/5/2018	\$ 30.83 / ft	0		
		8			D6201P	T Extrusion 4X4X3/8 as per dwg d6201 rev. b B173203					20		20		S047940 S047948	Stock	3/5/2018	\$ 20.25 / ft	0	
Total:										108			116							

Plex 3/5/2018 2:33 PM Dart.Dubois.Pascal



DELIVERY - CLIENT

Copy

CO00075960

ACIER OUELLETTE INC.
935, Boul. du Hâvre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Billed to

DART AEROSPACE LTD
1270, ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Instruction F-M

Delivery Route 5

Customer N°

CLI0001056

Date

2018/02/27

Delivery date

2018/03/05

Your order N°

039137

Processed by

Josianne Bourdon

Salesman

Carrier

OUELLETTE VALLEYFIELD

Credit Terme

Net 30 Days

Page

1

Product Description	Weight	Qty	U/M	PCS NB			Internal Use Only			
				CMD	EXP	B/O	IN	I	S	C
1 SHEET SS 22G SS304 #4 (4 X 8) FESS-22G483044 3437 2 X 4' X 8' HEAT L2230456	84.03	64.00	PI2_\$CLB				64mm	DAS 9-83		
2 ROUND CR 3 1/2 1018 (R) RCR-312 5323 1 X 6' HEAT: 42180 COUPE A LA SCIE SCIE 1	196.26	6.00	PI_\$CLB		1X6		61	DAS 9-83		
3 ROUND 4140 ANNEALED 3 1/4 (R) * R4140-314A 4943 1 X 6' HEAT: 228699	175.80	6.00	PI_\$CLB		6'		61	DAS 9-83		

NIR : R-109516-6

PIC

Next Page...



ACIER OUELLETTE INC.

935, Boul. du Hâvre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
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DELIVERY - CLIENT

Copy

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DART AEROSPACE LTD
1270, ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Instruction F-M

Delivery Route 5

Page

2

Product Description	Weight	qty	U/M	PCS NB			Internal Use Only				
				CMD	EXP	B/O	IN	I	S	C	OUT
TRANSIT ST-JEROME LE 01/03 COUPE A LA SCIE SCIE 1			1.00 UN								
5 TUBE ROUND SS 1.750 OD X .120 SS304 MF RANDOM NS TRSS-1750120ME-V 9055 1 X 20' R/L HEAT: YOL6 AC13903-CF-28/02	41.80	20.00	PL_\$CPI		20'		20' DAS 11 9-09				
6 T-BAR ALU 4 X 4 X 3/8 * 6061T6 TBAL-4438 6434 1 X 20' HEAT: 852198 AC13904-GF-28/02	68.60	20.00	PL_\$CLB		20'		20' DAS 11 9-09				

Total Weight (lbs) : 566.49

NIR : R-109516-6

Conditions :
All sold and delivered materials remain the property of "Acier Ouellette Inc" until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Acier Ouellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acier Ouellette Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to a 25% restocking charge.

Prepared By :

Verified By :

Delivered By :

Time

Customer's Signature

Date

Total (\$CAD)



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO039137**

Supplier: ACI001-VC
Acier Ouellette Inc.
935 Boul. Du Havre
Valleyfield
QC
J6S 5L1 Canada
Phone: 800 667 4248
Fax: 450 377 5696

PO No: PO039137

PO Date: 2/27/18

Due Date: 3/7/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Lavoie, Chantal
Phone: clavoie@dartaero.com

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments: quotation no: sou0088460

E-MAILED
FEB 27 2018

Items

Line Item	Part	Supplier Part No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	M2024T3S.100		2024-T3 .100 Sheet : MATERIAL: 2024-T3 ALUMINUM SHEET AS PER QQ-A-250/4 OR AMS-QQ-A-250/4 OR AMS 4037 OR ASTM B209 receive sf	Firmed	3/7/18	48 sf	0 sf	48 sf	\$17.1875/sf	\$825.00
2	M304S22GA4P		304/316 Sheet .032 : MATERIAL: AISI 304/316 SS SHEET ANNEALED AS PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240 receive sf	Firmed	3/7/18	64 sf	0 sf	64 sf	\$3.491875/sf	\$223.48
3	M1018R3.500		M1018R3.500 : MATERIAL: AISI 1018-1025 ROUND BAR M1010S20GA AS PER MIL-S-7097 OR ASTM A108 receive ft	Firmed	3/7/18	6 ft	0 ft	6 ft	\$31.09/ft	\$186.54
4	M4140N-R3.250		4140 Steel Round Bar 3.250" receive ft	Firmed	3/7/18	6 ft	0 ft	6 ft	\$53.3333/ft	\$320.00
5	MT-4140-S-1.250X11.000		AISI 4140 Steel Sheet/Plate	Firmed	3/7/18	12 ft	0 ft	12 ft	\$116.00/ft	\$1,392.00

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Items										
Line Item	Part	Supplier Part No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
Line Item Note 2 pcs of 6ft										
6	MT-4140-S-0.375X5.500		AISI 4140 Steel Sheet/Plate	Firmed	3/7/18	6 ft	0 ft	6 ft	\$31.3333/ft	\$188.00
7	M304TR1.750W.120		304 Seamless Tubing 1.75 X .120W : MATERIAL: AISI 304/316 SS SEAMLESS ROUND TUBING AS PER ASTM A213 OR ASME SA213 OR ASTM A269 receive ft	Firmed	3/7/18	12 ft	0 ft	12 ft	\$30.83333/ft	\$370.00
8	D6201P		T Extrusion 4X4X3/8 as per dwg d6201 rev. b B173203	Firmed	3/7/18	20 ft	0 ft	20 ft	\$20.25/ft	\$405.00
									Grand Total:	\$3,910.02
Order Notes										
<p>Procurement Quality Clauses</p> <p>A005 right of entry</p> <p>A012 chemical and physical test report</p> <p>A016 personnel qualification</p> <p>A017 raw material identification (as applicable)</p> <p>A026 certification of material conformance</p> <p>A041 quality management system</p> <p>A042 dart notification by supplier</p> <p>A043 retention of quality documents</p> <p>A048 counterfeit parts avoidance, detection, mitigation and disposition program</p> <p>A049 supplier awareness</p> <p>Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.</p>										

Plex 2/27/18 8:37 AM dart.lavoie.chantal



ACIER OUELLETTE INC.

935, Boul. du Havre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Quotation

SOU0088460

Billed to

DART AEROSPACE LTD
1270, ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Customer N°

CLI0001056

Date

2018/02/26

Revision N°

0

Prices valid until

2018/03/05

Your Order N°

Processed by

Josianne Bourdon

Salesman

JOSIANNE

Carrier

OUELLE SDV

Credit Terms

Net 30 Days

Page

1

Product N° and description	Weight	Qty	U/M	Qty	U/M	Price	Pcs Nb	Price	Amount
AL. FEUILLE .100 2024T3 N 1 X 4' X 12' 4-5 DAYS	0.00	1.00	UN	1.00	UN		1.00	825.000	825.00
SHEET SS 22G SS304 #4 (4 X 8) FESS-22G483044 3437 2 X 4' X 8' STOCK	84.03	64.00	PI2_\$CLB	2.00	UN		2.00	111.740	223.48
ROUND CR 3 1/2 1018 (R) * RCR-312 5323 1 X 6' STOCK COUPE A LA SCIE SCIE 1	196.26	6.00	PI_\$CLB	6.00	PI		1.00	186.540	186.54
SQUARE 4140 HT 1/2 N 1 X 8' 7-10 DAYS	0.00	1.00	UN	1.00	UN		1.00	276.000	276.00
ROUND 4140 ANNEALED 3 1/4" N 1 X 6' 2-3 DAYS	0.00	1.00	UN	1.00	UN		1.00	320.000	320.00
PLATE 4140 HT 1 1/4 N 2 X 11" X 72" 7-10 JOURS	0.00	2.00	UN	2.00	UN		2.00	696.000	1 392.00
PLATE 4140 HT 3/8 N 1 X 5 1/2" X 72" 7-10 DAYS	0.00	1.00	UN	1.00	UN		1.00	188.000	188.00
TUBE ROUND SS 1.750 OD X .120 SS304 MF RANDOM NS TRSS-1750120MF-V 9055 1 X 20' R/L 2-3 days	41.80	20.00	PI_\$CPI	20.00	PI		1.00	370.000	370.00
T BAR ALUMINIUM 6061T6 4 X 4 X .378 N 1 X 20' 2-3 DAYS	0.00	1.00	UN	1.00	UN		1.00	405.000	405.00

Date :

Next Page...

Date : _____ Total (\$CAD) **4 734.67**

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304Ti 1.7504.120

PO / BATCH NO.: 039137/5047939

DATE: MAR 05 2018

MATERIAL CERT REC'D: yes

THICKNESS ORDERED: 0.120

QUANTITY RECEIVED: 20'

THICKNESS RECEIVED: 0.120

QUANTITY INSPECTED: 20'

SHEET SIZE ORDERED: N/A

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	(N)	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	(N)	
CORRECT MATERIAL PER M-DRAWING	(Y)	(N)	Actm A534
CORRECT THICKNESS	(Y)	(N)	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	(Y)	(N)	Heat # 7066
CORRECT MATERIAL IDENTIFICATION	(Y)	(N)	
CORRECT M# ON THE MATERIAL	(Y)	(N)	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS</u> <u>11</u> DATE: <u>9-89 MAR 05 2018</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

PURCHASE MATERIAL: AISI 304/316 STAINLESS STEEL SQUARE TUBING

FINISH:

ASTM A554 MILL FINISH
OR ASTM A269 MILL FINISH

PART NUMBER:

M304TS | A.AAA | W | TTT
| WIDTH | | WALL

PART NUMBER:

EG. 0.75" X 0.75" X 0.049 WALL = M304TS0.750W.049

WHERE:

A.AAA = WIDTH IN INCHES
TTT = WALL THICKNESS IN INCHES

D	"SEAMLESS" REMOVED FROM PURCHASE MATERIAL SPECIFICATION (SEE NCRI-4-3818)	DB	14.06.20
C	"SEAMLESS" ADDED TO PURCHASE MATERIAL. ASTM A269 ADDED TO FINISH. REASON: SPEC ADDED FOR 1/2" TUBING	AJS	09.10.16
B	DRAWING MOVED TO "B" SIZE BORDER. FINISH ADDED (SEE NCR 09-046 FOR DETAILS).	AJS	09.08.28
A	NEW ISSUE	DS	01.06.08
REV.	DESCRIPTION	BY	DATE
DRAWN	DS		
CHECKED	DB		
MFG. APPR.	M304TS		
APPROVED			
DE APPR.	304/316 SQUARE TUBING		
DATE	14.05.20		

COMPANY: DART AEROSPACE LTD.
HAMMERSBURY, ONTARIO, CANADA

REVISION: 1
SHEET 1 OF 1
SCALE: NONE

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RELEASED
2014-05-26

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M4140N-R3.250

PO / BATCH NO.: 039137/5047938

DATE: MAR 05 2018

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 6'
 QUANTITY INSPECTED: 6'
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 3.250
 THICKNESS RECEIVED: 3.250
 SHEET SIZE ORDERED: N/A
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y (N)	
CORRECT FINISH	(Y) N	
CORROSION	Y (N)	
CORRECT GRAIN DIRECTION	(Y) N	
CORRECT MATERIAL PER M-DRAWING	(Y) N	A516m A29
CORRECT THICKNESS	(Y) N	
PHOTO REQUIRED	Y (N)	
CORRECT REF # TO LINK CERT	(Y) N	Heat # 228699
CORRECT MATERIAL IDENTIFICATION	(Y) N	
CORRECT M# ON THE MATERIAL	(Y) N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y (N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y (N)	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.
 RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>DAS</u> <u>11</u>	SIGNED OFF BY: _____		
DATE: <u>9-89</u> <u>MAR 05 2018</u>	DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



DESIGN #	DRAWN BY #	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. M4140H-R	REV. A SHEET 1 OF 1
DATE 05.02.21		TITLE 4140 ROUND BAR	SCALE 1:1
A	05.02.21	NEW ISSUE	

PURCHASE MATERIAL: AISI 4140H ROUND BAR

PER AISI 4140 OR ASTM A304/02/-A-434-BC /

-A193-03-GRADE-B7 / -429-03 / A322-91 OR

UNS# - G41400

MINIMUM ULTIMATE TENSILE STRENGTH = 100 KSI

MINIMUM YIELD TENSILE STRENGTH = 66 KSI

PART NUMBER: M4140H-R | D.DDD | WHERE D.DDD = DIAMETER IN INCHES
DIA

EG. $\frac{7}{8}$ " ROUND BAR = M4140H-R0.875

RELEASED
05 03 25 #

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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M1C18R3.500
 DATE: MAR 05 2018

PO / BATCH NO.: 039137/5047937

MATERIAL CERT REC'D: yes
 QUANTITY RECEIVED: 61
 QUANTITY INSPECTED: 61
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 3.500
 THICKNESS RECEIVED: 3.500
 SHEET SIZE ORDERED: N/A
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y (N)	
CORRECT FINISH	(Y) N	
CORROSION	Y (N)	
CORRECT GRAIN DIRECTION	(Y) N	
CORRECT MATERIAL PER M-DRAWING	(Y) N	<u>As in A108</u>
CORRECT THICKNESS	(Y) N	
PHOTO REQUIRED	Y (N)	
CORRECT REF # TO LINK CERT	(Y) N	<u>Heat # 42180</u>
CORRECT MATERIAL IDENTIFICATION	(Y) N	
CORRECT M# ON THE MATERIAL	(Y) N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y (N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y (N)	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.
 RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS</u> <u>11</u> DATE: <u>9-89</u> <u>MAR 05 2018</u>	SIGNED OFF BY: _____ DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 1018-1025 ROUND BAR
 SPECIFICATION: MIL-S-7097 OR ASTM A108
 PART NUMBER: M1018-R10.DDD (WHERE D.DDD = DIAMETER IN INCHES)

EG. 7/8" ROUND BAR = M1018-R0.875

TOLERANCES: PER ASTM A108 AS FOLLOWS:

SIZE	TOLERANCE
UP TO 1.5" INCL.	+0.000/-0.002
OVER 1.5" TO 2.5" INCL.	+0.000/-0.003
OVER 2.5" TO 4.0" INCL.	+0.000/-0.004
OVER 4.0" TO 6.0" INCL.	+0.000/-0.005
OVER 6.0" TO 8.0" INCL.	+0.000/-0.006

RELEASED
 2012-09-14

B	REFORMAT. ADD ASTM A108, ADD TOLERANCES	CP	12.09.05
A	NEW ISSUE	DS	01.08.12
REV.	DESCRIPTION	BY	DATE
DESIGN	DS		
DRAWN	CP		
CHECKED	CP		
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	12.09.05		

DART AEROSPACE LTD	
HAWKESBURY, ONTARIO, CANADA	
DRAWING NO.	REV. B
M1018-R	SHEET 1 OF 1
TITLE	SCALE
1018-1025 ROUND BAR	NTS

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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304522G-A4P
 DATE: MAR 05 2018

PO / BATCH NO.: 039137/5047936

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 64P.2
 QUANTITY INSPECTED: 64P.2
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 226
 THICKNESS RECEIVED: 226
 SHEET SIZE ORDERED: 4x8
 SHEET SIZE RECEIVED: 4x8

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N	<u>As per A240</u>
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	(Y)	(N)	
CORRECT REF # TO LINK CERT	(Y)	N	<u>Heat # L2230456</u>
CORRECT MATERIAL IDENTIFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS</u> DATE: <u>9-2 MAR 05 2018</u>	SIGNED OFF BY: _____ DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 304/316 SS SHEET
ANNEALED

SPECIFICATION:

MIL-S-5059
OR AMS 5513 (304)
OR AMS 5524 (316)
OR ASTM A240
OR ASME SA240

FINISH:

DART M-NUMBER

IDENTIFIER

FINISH
UNPOLISHED No. 1
UNPOLISHED No. 2D
UNPOLISHED No. 2B
POLISHED No. 3
POLISHED No. 4
BUFFED No. 6
BUFFED No. 7
BUFFED No. 8

PART NUMBER:

M304S TT GA #P
[GA]

WHERE "TT" = GAUGE THICKNESS
WHERE "#P" = FINISH IDENTIFIER

EG. 16 GAUGE SS SHEET 2B FINISH = M304S16GA
EG. 16 GAUGE SS SHEET No. 4 POLISHED = M304S16GA4P

GAUGE THICKNESS REFERENCE:

GAUGE	NOM. THICK. (IN)	THICKNESS RANGE (IN)
26	0.01875	0.0178 - 0.019
25	0.021875	0.0199 - 0.023
24	0.025	0.024 - 0.026
23	0.028125	0.027 - 0.029
22	0.03125	0.030 - 0.032
21	0.034375	0.033 - 0.035
20	0.0375	0.036 - 0.040
19	0.04375	0.041 - 0.046
18	0.050	0.047 - 0.052
17	0.05625	0.053 - 0.058
16	0.0625	0.059 - 0.065
15	0.0703125	0.066 - 0.072
14	0.078125	0.073 - 0.083
13	0.09375	0.084 - 0.098
12	0.109375	0.099 - 0.114
11	0.125	0.115 - 0.130
10	0.140625	0.131 - 0.145
9	0.15625	0.146 - 0.160
8	0.171875	0.161 - 0.176
7	0.1875	0.182 - 0.194
6	0.2031	0.194 - 0.212
5	0.2188	0.201 - 0.228
4	0.2344	0.225 - 0.243
3	0.2500	0.238 - 0.262
2	0.2656	0.254 - 0.278
1	0.2813	0.269 - 0.293
0	0.3125	0.301 - 0.325

RELEASED
2015 FEB 04
ECLN 15-122

D	ADDED GAUGES 0-7	AJS	15.01.06
C	DEFINED FINISH OPTION (ZN CB) AND EXAMPLE OF MATERIAL FIN WITH FINISH OTHER THAN 2B (ZN B5).	MB	12.09.20
B	REFORMAT DWG. ADD ASTM/ASME SPECS (ZN D6-1), ADD GAUGE REF (CB-1), REF PAR 08-020A	CP	09.06.01
A	NEW ISSUE	DS	01.09.24
REV	DESCRIPTION	BY	DATE
DESIGN	DS		
DRAWN	AJS		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	15.01.06		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. M304S			
REV. D			
SHEET 1 OF 1			
TITLE 304/316 SS SHEET			
SCALE NTS			
COPYRIGHT © 2001 BY DART AEROSPACE LTD			
THIS DOCUMENT IS THE PROPERTY OF DART AEROSPACE LTD. IT IS TO BE USED ONLY FOR THE PURPOSES FOR WHICH IT WAS ISSUED.			

#3437

FESS-226483041

TR-2098

49621

INSPECTION CERTIFICATE

YIEN MAU CORP.
YIEN MAU CORP.

INVOICE NO. F17M610
COMMODITY PRIMARY COLD ROLLED STAINLESS STEEL SHEETS
SPECIFICATION AISI 304
CUSTOMER EMPIRE RESOURCES, INC.

工廠:高雄路竹區安陸路345號
346, SHUNAN RD., LU CHU HSIANG
KAOHSIUNG HSIEN TAIWAN R.O.C.
TEL: (07) 6972885 FAX: (07) 6973009
CERTIFICATE NO: F17M610-2
DATE OF ISSUE: 08/14/2017

CUSTOMER	AMPIRE RESOURCES, INC.				Physical Properties Tensile Test CL=50 mm						Chemical Properties (%)									
SIZE	NO. of Product	Weight KG NET	Heat No.	ID No.	Y.S.	T.S.	EL.	HRD	HV	C	SI	Mn	P	S	NI	Cr	N			
					PSI	PSI	(%)			±100	±100	±100	±1000	±1000	±100	±100	±100			
120"(3.0MM) X 48" X 96"	1	1871	YU183647	85S16127A-111	307	578	54	86	171	4.2	43	98	34	2	810	1818	2.8			
060"(1.5MM) X 48" X 96"	1	1885	YU183646	85S161398-11	308	585	50	87	180	3.8	42	92	35	11	809	1808	2.9			
048"(1.2MM) X 48" X 96"	1	1882	YU183346	84S14327A-11	288	636	46	84	168	2.3	33	91	33	4	802	1812	3.3			
030"(0.8MM) X 48" X 96"	1	1036	LZ230458	84S78053B-11	293	578	61	86	171	2.4	41	90	33	3	808	1833	5.5			
PS4 48 18 YU183647.																				
PS4 48 166 YU183646.																				
PS4 48 186 YU183346.																				
PS4 48. 226 LZ 230458																				

154 48 18 YU183647
154 48 166 YU183646
154 48 186 YU183346
154 48 225 LZ230458

4 7557
Remains:
NO MERCURY CONTAMINATION
WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS
DEEPLY MADE IN ACCORDANCE WITH THE RULES OF THE MILL CERTIFICATE

ASTM A686-15/ASME SA886-15 ANNEALED
COUNTRY OF MELT AND MANUFACTURE: TAIWAN

2000 TENSILE STRENGTH FOR ALL HEAT NO.
LASER BLAZED-15/16-15 ASTM A240-15/16-15 TYPE 304
2) INTERGRANULAR CORROSION IN ACCORDANCE WITH ASTM A302-E
3) Hydrotest 1.25MPa/ASTM E19, 10, 0.001MPa/ASTM E19, 10
4) Tensile Test ASTM E21
5) Test Method: G.S./ASTM E1019, 10
6) Other: Stress: ASTM E1000, 10
7) MERCURY FREE
8) SOURCE: YUSCO
9) CHEMICAL PROPERTIES AND PHYSICAL PROPERTIES COMPLY TO AMS 8812J

YIEN MAU CORP.
Manager of Quality Assurance Division

5323

RCK-312-V

TRA 1834
49872
2P

ARANA Y LUPARDO, 2
48490 UGAO-MIRAVALLS/VIZCAYA (SPAIN)
Tfno.: 946480211
Fax: 946480128
Email: calpradera@calibradospradera.es
www.calibradospradera.es

CERTIFICADO DE CALIDAD/QUALITY REPORT

De acuerdo a /Made according to:

EN 10204/DIN 50049

3.1

N° CERTIFICADO / CERTIFICATE NR.: 50152

ALBARAN 50152
Delivery Note Nr.

CLIENTE LBS ACIERS TRANSBEC (1997) LTÉE
CUSTOMER

Norma : EN 10277

Productos Calibrados de acero. Condiciones técnicas de suministro.

Norm :

Bright steel products. Technical delivery conditions.

PRODUCTO SOLICITADO / PRODUCT ACCORDING ASTM A108

Nº PEDIDO Purchase Order	DESCRIPCIÓN Description	ESPALES Thickness	TOLERANCIA TOLERANCE	OF	MEDIDA Measurement
OU-47949	1018 RED. TORNEADO 88,90 (3 1/2") -	1.016	- 0,102 -	141121	88,90
VI-48475	1018 RED. ESTIRADO 38,10 (1 1/2")	3.224	- 0,051	141144	38,10
VI-48475	1018 RED. ESTIRADO 44,45 (1 3/4")	1.916	- 0,076	141143	44,45
VI-48475	1018 RED. ESTIRADO 60,33 (2 3/8")	1.088	- 0,076	141139	60,33
PAJ-48144	1018 RED. ESTIRADO 44,45 (1 3/4")	1.038	- 0,076	141273	44,45
PAJ-48144	1018 RED. TORNEADO 74,61 (2 15/16")	1.068	- 0,102	141277	74,61
PAJ-48144	1018 RED. TORNEADO 76,20 (3")	1.109	- 0,102	141278	76,20
MN-48543	1018 RED. ESTIRADO 44,45 (1 3/4")	2.076	- 0,076	141426	44,45
MN-48543	1018 RED. TORNEADO 88,90 (3 1/2") =	2.030	- 0,102 -	141418	88,90
MN-48543	1018 RED. TORNEADO 101,6 (4")	2.086	- 0,102	916872	101,60
MN-48543	1018 RED. TORNEADO 74,61 (2 15/16")	2.140	- 0,102	141420	74,61
PAR-48683	1018 RED. ESTIRADO 34,93 (1 3/8")	1.042	- 0,051	141601	34,93
PAR-48683	1018 RED. ESTIRADO 60,33 (2 3/8")	2.082	- 0,076	141604	60,33
MJP-48682	1018 RED. ESTIRADO 36,51 (1 7/16")	1.048	- 0,051	916874	36,51
PAR-48683	1018 RED. TORNEADO 76,20 (3")	1.109	- 0,102	141605	76,20

Composición química de la colada / Chemical Analysis of Heat

MEDIDA Measurement	OF	COLADA Cast No.	% C	% Cu	% Mn	% N	% P	% S	% Si
88,90 0,00	141121	42180	0,160	0,070	0,810	0,010	0,017	0,030	0,210
38,10 0,00	141144	42201 AG	0,170	0,148	0,768	0,004	0,011	0,023	0,198
44,45 0,00	141143	42311 IS	0,170	0,000	0,650	0,000	0,015	0,027	0,310
60,33 0,00	141139	42291 IS	0,170	0,000	0,650	0,000	0,015	0,027	0,310
44,45 0,00	141273	42311 IS	0,170	0,000	0,650	0,000	0,015	0,027	0,310
74,61 0,00	141277	42282 RA	0,165	0,180	0,790	0,000	0,012	0,022	0,210
76,20 0,00	141278	42282 RA	0,165	0,180	0,790	0,000	0,012	0,022	0,210
44,45 0,00	141426	42311 IS	0,170	0,000	0,650	0,000	0,015	0,027	0,310
88,90 0,00	141418	42180	0,160	0,070	0,810	0,010	0,017	0,030	0,210
101,60 0,00	916872	41627	0,160	0,190	0,810	0,000	0,017	0,015	0,210
74,61 0,00	141420	42282 RA	0,165	0,180	0,790	0,000	0,012	0,022	0,210
34,93 0,00	141601	42320 IS	0,170	0,000	0,670	0,000	0,022	0,022	0,300
60,33 0,00	141604	42291 IS	0,170	0,000	0,650	0,000	0,015	0,027	0,310
36,51 0,00	916874	40277 IS	0,160	0,000	0,710	0,000	0,018	0,003	0,310
76,20 0,00	141605	42282 RA	0,165	0,180	0,790	0,000	0,012	0,022	0,210

Características mecánicas / Mechanical properties



ARANA Y LUPARDO, 2
48490 UGAO-MIRAVALLÉS/VIZCAYA (SPAIN)
Tfno.: 946480211
Fax: 946480128
Email: calpradera@calibradospradera.es
www.calibradospradera.es

CERTIFICADO DE CALIDAD/QUALITY REPORT

De acuerdo a / Made according to:

EN 10204/DIN 50049

3.1

Nº CERTIFICADO / CERTIFICATE NR.: 50152

ALBARAN 50152
Delivery Note Nr.

CLIENTE LES ACIERS TRANSSEC (1997) LTÉE
CUSTOMER

Norma : EN 10277

Productos Calibrados de acero. Condiciones técnicas de suministro.

Norm :

Bright steel products. Technical delivery conditions.

MEDIDA		OF	COLADA	Resistencia Tens. strength	Lím.elástico Yield point	Alargamiento Elongation	Dureza HB Hardness
Measurement			Cast Nr.	N/mm2	0,2% N/mm2	Lo=50 mm.	HB
88,90		141121	42180	458,00	301,00	30,00	135,00
38,10		141144	42201 AG	473,00	0,00	0,00	0,00
44,45		141143	42311 IS	0,00	0,00	0,00	142,00
60,33		141139	42291 IS	0,00	0,00	0,00	137,00
44,45		141273	42311 IS	0,00	0,00	0,00	142,00
74,61		141277	42282 RA	480,00	299,00	34,50	0,00
76,20		141278	42282 RA	480,00	299,00	34,50	0,00
44,45		141426	42311 IS	0,00	0,00	0,00	142,00
88,90		141418	42180	458,00	301,00	30,00	135,00
101,60		916872	41627	478,00	306,00	33,20	148,00
74,61		141420	42282 RA	480,00	299,00	34,50	0,00
34,93		141601	42320 IS	0,00	0,00	0,00	143,00
60,33		141604	42291 IS	0,00	0,00	0,00	137,00
36,51		916874	40277 IS	0,00	0,00	0,00	152,00
76,20		141605	42282 RA	480,00	299,00	34,50	0,00

Calidad Superficial

DESCRIPCIÓN Description	OF	Clase EN 10277-1

Observaciones: BARRAS DE ACERO ESTIRADAS / TORNEADAS EN FRIO SIN ALEAR

DEPARTAMENTO DE CALIDAD: Certifica que el mencionado producto cumple con las especificaciones del pedido.

QUALITY DEPARTMENT: Certify that the product fulfils the order specifications.

Fecha/Date: 20/12/2017

Firmado: Susana Fernández
Directora de Calidad



Sistema de
Gestión
ISO 9001:2008

www.tuv.com
D. 1150 0001/0

CO. 75960 DART

R4A-314

NOV 10 2010
B. Bassi
Maglia

ABS ACCIAIERIE BERTOLI SAFAU ABSOLUTE STEEL QUALITY ACCIAIERIE BERTOLI SAFAU SpA Via Bortolo n.28 - Frazione Cargnola - 33050 Pozzuolo del Friuli (UD) Tel. +39 0432 613211 - Fax +39 0432 613209 - www.absacciai.it		CERTIFICATO DI COLLAUDO Inspection Certificate 3.1/Certificat de reception 3.1/ Abnahmeprüfzeugnis 3.1		N. 12057411 Data 09.04.2015 COLATAN. 2285992								
CLIENTE Customer-Client-Besteller MAGELLAN CORPORATION		ORDINE Order-Commande-Bestellung 210327		Pag. 1/2								
PROFILO Shape-Section-Profil HOT ROLLED ROUND BARS, 82,55 MM - 3		STATO DI FORNITURA Delivery Status-Etat de livraison FULLY ANNEALED		Compressa/Pos 1029822/110								
ACCIAIO Steel-Acier-Stahl AISI 4140		CAPITOLATO ABS: Technical Specification: ABS										
CAPITOLATO DI ANALISI: Material Specification: MAGELLAN MIC 6016/2010 ADD.5 DEC.07-2014		CAPITOLATO DI FORNITURA: Technical Delivery Requirements: MAGELLAN MIC 6016-10 12.22.2010										
COMPOSIZIONE CHIMICA % CHEMICAL ANALYSIS % - COMPOSITION CHIMIQUE % - CHEMISCHE ZUSAMMENSETZUNG %												
	C	Mn	Si	P	S	Cr	Ni	Mo	Al (T)	Cu	Sn	Ti
Min	0,400	0,75	0,15		0,020	0,80		0,15	0,020			
Max	0,430	1,00	0,35	0,035	0,040	1,10	0,25	0,25	0,050	0,35	0,100	0,0500
Colata/Heat	0,405	0,84	0,27	0,011	0,021	1,04	0,14	0,23	0,021	0,22	0,010	0,0030
	B (T)	V	Nb	As	Ca	Sb	Co	Pb	O2/ppm	H2/ppm	D.I. INCH	
Min											5,40	
Max	0,0008	0,100	0,050	0,100	0,1000	0,100	0,300	0,1000	20,00	3,00		
Colata/Heat	0,0001	0,008	0,004	0,005	0,0005	0,001	0,021	0,0010	13,00	1,40	8,21	
ASTM A255-10 VACUUM DEGAISED CALCIUM ALUMINUM TREATED ELECTRICAL FURNACE MELTED ANALYSIS TOLERANCE ASTM A29/A29M-12 FINE GRAIN STEEL FULLY KILLED												
CARATT. MECCANICHE MECHANICAL PROPERTIES - CARACTERISTIQUES MECANIQUE - MECHANISCHE EIGENSCHAFTEN												
TRATTAMENTO TERMICO HEAT TREATMENT												
DUREZZE HARDNESS												
	SURFACE HARDNESS											
Min												
Max	212HB											
Colata/Heat	195HB											
ACC. TO ASTM E10-12												
PROVA JOMINY JOMINY TEST - ESSAI JOMINY - STERNHAUSCHRECKVERSUCH												
	J1/16" - HRC	J2/16" - HRC	J3/16" - HRC	J4/16" - HRC	J5/16" - HRC	J6/16" - HRC	J7/16" - HRC	J8/16" - HRC	J9/16" - HRC	J10/16" - HRC	J11/16" - HRC	J12/16" - HRC
Min	55	55	54	53	53	52	51	50	49	47	46	44
Max	60	60	60	59	59	58	58	57	57	56	56	55
Colata/Heat	58,2	57,8	57,8	57,5	67,1	58,4	55,4	54,8	53,9	53,2	52,6	52,1
	J13/16" - HRC	J14/16" - HRC	J15/16" - HRC	J16/16" - HRC	J17/16" - HRC	J18/16" - HRC	J19/16" - HRC	J20/16" - HRC	J21/16" - HRC	J22/16" - HRC	J23/16" - HRC	J24/16" - HRC
Min	42	41	40	39	37	36	35	34	34	34	33	33
Max	53	54	54	53	52	51	49	48	47	46	45	44
Colata/Heat	51,1	50,1	49,3	48,4	46,7	44,9	43,3	41,9	40,6	39,3	38,5	37,6
HARDENABILITY INCH-HRC ACC. TO ASTM A304 - A255												
AUSTENITIZING TEMPERATURE 850°C												
INCLUSIONI NON METALLICHE NON METALLIC INCLUSION - INCLUSIONS NON METALLIQUES - PRUFUNG NICHTMETALLISCHE EINSCHLUSSE												
	Tipo A Type A	Tipo B Type B	Tipo C Type C	Tipo D Type D								
Fine Thio	2	0	0	1								
Grasso Heavy	1	0	0	0,5								

PO. 13903

PHOENIX TUBE COMPANY, INC.
Manufacturer of Stainless Ornamental and Structural Tubing
CERTIFICATION OF TEST

CUSTOMER ORDER#: C104124

CUST REF NBR:

DATE SHIPPED: 06/09/18

SIZE: 1-3/4RD X 11GA AW

SOURCE: USA

VENDOR: NAS

Phone# 5492603

Ext:

ORDER#: 398480

QTY SHIPPED: 540.0

GRADE: 304L

WELD: TIG

HEAT#: Y0L6

TEST REPORT#: TR013131

Report Date: 02/19/16

Specification:

ASTM A554-15A

ASTM-A 240-15b

MFG USING

ANNEALED, AND SHOWS NO
1900F WATER QUENCHED.

T304L/304 DUAL CERTIFIED MT NO WELD REPAIR

RAW MATERIAL SPEC.

ANNEALED AND PICKLED

CONTINUOUS CARBIDE

UNS# 30400 / 30403

RoHS COMPLIANT

PLATE, SHEET OR STRIP

PRECIPITATION.

AISI 304L

EN 10204 2.2

NACE MR0175/01

MATERIAL IS FULL SOLUTION
MIN. SOLUTION ANNEAL TEMP

MERCURY IS NOT USED BY US AS AN ALLOYING MATERIAL NOR IS METALLIC MERCURY HANDLED IN THE VICINITY
OF OUR PROCESSING LINES. MATERIAL IS FREE OF MERCURY CONTAMINATION.

Chemical Analysis

C	MN	P	S	SI	CR	NI	MO	CU	CO	N2	TI
.01	1.74	.03	.012	.25	18.20	8.03	.31	.34	N/A	.09	N/A

Physical Analysis

	YIELD		TENSILE		OTHER	
Hardness	PSI	MPA	PSI	MPA	Percent EL	Percent RA
RB 85	46870	N/A	94020	N/A	49	N/A

THE CHEMICAL ANALYSES ARE CORRECT AS CONTAINED IN OUR CORPORATE RECORDS.
PHYSICAL PROPERTIES ARE DETERMINED WHILE MATERIAL IS IN STRIP FORM.

THIS MATERIAL INCLUDING THE BILLETS, WAS
Melted & MFG in USA DFARS 252.225 Subsection Compliant, FAR BAA, DFAR BAA, FAR TAA Complies

CERTIFIED BY Inventory Control Dept.

Jane L. L...

1185 WIN DR, BETHLEHEM, PA., 18017 - (610) 865-5337

FAX NUMBER: 610-865-4073

190546